MEDCOM GUIDANCE FOR RISK ASSESSMENT AND PUBLIC HEALTH MANAGEMENT OF HEALTHCARE WORKERS WITH POTENTIAL EXPOSURE IN A HEALTHCARE SETTING TO PATIENTS WITH CORONAVIRUS DISEASE

TIP No. 98-101-0320

PURPOSE:

This information paper provides U.S. Army Medical Command (MEDCOM) Guidance for Risk Assessment and Public Health Management of Healthcare Workers (HCWs) with Potential Exposure in a Healthcare Setting to Patients with Coronavirus Disease (COVID-19)[1].

GUIDANCE:

Military Treatment Facility COVID-19 Management Planning

Commanders are encouraged to incorporate this guidance as appropriate into the medical treatment facility's (MTF) COVID-19 management plan:

- Healthcare facilities should have a low threshold for evaluating symptoms and testing symptomatic HCWs, particularly those who fall into the high- and medium-risk categories described in this guidance.

- MTFs, in consultation with public health authorities[2], should use clinical judgement as well as the principles outlined in this guidance to assign risk and determine need for work restrictions.

- MTFs should develop a plan for how they will screen for symptoms and evaluate ill HCWs. This could include having HCWs report absence of fever and symptoms prior to starting work each day.

- HCWs should report recognized exposures, regularly monitor themselves for fever and symptoms of respiratory infection, and not report to work when ill.

- MTFs could consider allowing asymptomatic HCWs who have had an exposure to a COVID-19 patient to continue to work after options to improve staffing have been exhausted and in consultation with their occupational health program. These HCWs should still report temperature and absence of symptoms each day prior to starting work. Facilities could have exposed HCWs wear a facemask while at work for the 14 days after the exposure event if there is a sufficient supply of facemasks. If HCWs develop even mild symptoms consistent with COVID-19, they must cease patient-care

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[1] Extracted from the Centers for Disease Control and Prevention (CDC) guidance document entitled *Interim U.S. Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with Coronavirus Disease (COVID-19)*, available at https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html.

[2] Public health authorities may be organic to the U.S. Army Medical Activity/U.S. Army Medical Center, organic to a higher headquarters, or offpost Civilian authorities.

activities, don a facemask (if not already wearing), and notify their supervisor or occupational health services prior to leaving work.

- This guidance applies to HCWs with potential exposure in a healthcare setting to patients with confirmed COVID-19. However, exposure to an HCW could involve a person under investigation (PUI) who is awaiting testing. Implementing monitoring and work restrictions described in this guidance could be applied to an HCW exposed to a PUI if test results for the PUI are not expected to return within 48 to 72 hours. A record of HCWs exposed to a PUI should be maintained, and HCWs should be encouraged to perform self-monitoring while awaiting test results. If the results will be delayed more than 72 hours or the patient is positive for COVID-19, then the monitoring and work restrictions described in this document should be followed.

- The CDC guidance document entitled, *Interim US Guidance for Risk Assessment and Public Health Management of Persons with Potential Coronavirus Disease (COVID-19) Exposure in Travel-associated or Community Settings* (Appendix A), outlines criteria for quarantine and travel restrictions specific to high-risk exposures. Use this guidance document for information about the movement, public activity, and travel restrictions that apply to exposed HCWs.

The table below describes possible scenarios that can be used to assist with risk assessment. These scenarios do not cover all potential exposure scenarios and should not replace an individual assessment of risk for the purpose of clinical decision making or individualized public health management. Any public health decisions that place restrictions on an individual's or group's movements or impose specific monitoring requirements should be based on an assessment of risk for the individual or group. MTFs, in consultation with public health authorities, should use the concepts outlined in this guidance along with clinical judgement to assign risk and determine need for work restrictions.

Table. Possible Scenarios to Assist with Risk Assessment

Epidemiologic risk factors	**Exposure category**	**Recommended Monitoring for COVID-19 (*until 14 days after last potential exposure*)**	**Work Restrictions for an Asymptomatic HCW**
Scenario 1: Prolonged close contact with a COVID-19 patient who was wearing a facemask (i.e., source control)			
HCW Personal Protective Equipment (PPE): None	Medium	Active	Exclude from work for 14 days after last exposure
HCW PPE: Not wearing a facemask or respirator	Medium	Active	Exclude from work for 14 days after last exposure
HCW PPE: Not wearing eye protection	Low	Self with delegated supervision	None
HCW PPE: Not wearing gown or gloves[a]	Low	Self with delegated supervision	None

Epidemiologic risk factors	**Exposure category**	**Recommended Monitoring for COVID-19 (*until 14 days after last potential exposure*)**	**Work Restrictions for an Asymptomatic HCW**
HCW PPE: Wearing all recommended PPE (except wearing a facemask instead of a respirator)	Low	Self with delegated supervision	None
Scenario 2: Prolonged close contact with a COVID-19 patient who was not wearing a facemask (i.e., no source control)			
HCW PPE: None	High	Active	Exclude from work for 14 days after last exposure
HCW PPE: Not wearing a facemask or respirator	High	Active	Exclude from work for 14 days after last exposure
HCW PPE: Not wearing eye protection[b]	Medium	Active	Exclude from work for 14 days after last exposure
HCW PPE: Not wearing gown or gloves[a, b]	Low	Self with delegated supervision	None
HCW PPE: Wearing all recommended PPE (except wearing a facemask instead of a respirator)[b]	Low	Self with delegated supervision	None

Notes:

[a] The risk category for these rows would be elevated by one level if HCW had extensive body contact with the patient (e.g., rolling the patient).

[b] The risk category for these rows would be elevated by one level if HCW performed or were present for a procedure likely to generate higher concentrations of respiratory secretions or aerosols (e.g., cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction). For example, HCW who were wearing a gown, gloves, eye protection, and a facemask (instead of a respirator) during an aerosol-generating procedure would be considered to have a medium-risk exposure.

Additional Scenarios

HCWs not using all recommended PPE, who have only brief interactions with a patient regardless of whether patient was wearing a facemask, are considered low risk. Examples of brief interactions include: brief conversation at a triage desk; briefly entering a patient room but not having direct contact with the patient or the patient's secretions/excretions; entering the patient room immediately after the patient was discharged.

HCWs who walk by a patient or who have no direct contact with the patient or their secretions/excretions and no entry into the patient room are considered to have no identifiable risk.

While body fluids other than respiratory secretions have not been clearly implicated in transmission of COVID-19, unprotected contact with other body fluids, including blood, stool, vomit, and urine might put an HCW at risk of COVID-19.

Recommendations for Monitoring Based on COVID-19 Exposure Risk

An HCW in any of the risk exposure categories described below who develops signs or symptoms compatible with COVID-19 must contact their established point of contact (i.e., public health authorities or the MTF's occupational health program) for medical evaluation prior to returning to work.

1. High- and Medium-risk Exposure

An HCW in the high- or medium-risk category should undergo active monitoring, including restriction from work in any healthcare setting until 14 days after their last exposure. If they develop any fever (measured temperature >100.0^{o}F or subjective fever) OR respiratory symptoms consistent with COVID-19 (e.g., cough, shortness of breath, sore throat), they should immediately self-isolate (separate themselves from others) and notify their local or state public health authority and healthcare facility promptly so that they can coordinate consultation and referral to a healthcare provider for further evaluation.

2. Low-risk Exposure

An HCW in the low-risk category should perform self-monitoring with delegated supervision until 14 days after the last potential exposure. Asymptomatic HCWs in this category are not restricted from work. They should check their temperature twice daily and remain alert for respiratory symptoms consistent with COVID-19 (e.g., cough, shortness of breath, sore throat). They should ensure they are afebrile and asymptomatic before leaving home and reporting for work. If they do not have a fever or respiratory symptoms, they may report to work. If they develop a fever (measured temperature > 100.0^{o}F or subjective fever) OR respiratory symptoms, they should immediately self-isolate (separate themselves from others) and notify their local or state public health authority or healthcare facility promptly so that they can coordinate consultation and referral to a healthcare provider for further evaluation. On days HCWs are scheduled to work, MTFs could consider measuring temperature and assessing symptoms prior to starting work. Alternatively, facilities could consider having HCWs report temperature and symptoms to occupational health prior to starting work. Modes of communication may include telephone calls or any electronic or Internet-based means of communication.

3. HCWs who Adhere to All Recommended Infection Prevention and Control Practices

Proper adherence to currently recommended infection control practices, including all recommended PPE, should protect HCWs having prolonged close contact with patients infected with COVID-19. However, to account for any inconsistencies in use or adherence that could result in unrecognized exposures, HCWs should still perform self-monitoring with delegated supervision as described under the low-risk exposure category.

4. No Identifiable Risk Exposure

HCWs in the no-identifiable risk category do not require monitoring or restriction from work.

5. Community or Travel-associated Exposures

HCWs with potential exposures to COVID-19 in community settings should have their exposure risk assessed according to CDC guidance. HCWs should inform their MTF's occupational health program that they have had a community or travel-associated exposure. HCWs who have a community or travel-associated exposure should undergo monitoring as defined by that guidance. Those who fall into the high- or medium-risk category described in the guidance should be excluded from work in a healthcare setting until 14 days after their exposure. HCWs who develop signs or symptoms compatible with COVID-19 should contact their established point of contact (public health authorities or their facility's occupational health program) for medical evaluation prior to returning to work.

Return to Work Criteria for HCWs with Confirmed or Suspected COVID-19 Infection[3]

MTFs should refer to the below strategies to determine when HCWs with confirmed or suspected COVID-19 infection may return to work in healthcare settings.

1. Test-based strategy

The HCW should be excluded from work until fever is resolved without the use of fever-reducing medications, there is an improvement in respiratory symptoms (e.g., cough, shortness of breath), and negative results are received from a U.S. Food and Drug Administration (FDA) Emergency Use Authorized molecular assay for COVID-19 from at least two (2) consecutive nasopharyngeal swab specimens collected ≥ 24 hours apart (total of two negative specimens).

2. Non-test-based strategy

The HCW should be excluded from work until at least three (3) days (72 hours) have passed *since recovery*, defined as resolution of fever without the use of fever-reducing medications, there is an improvement in respiratory symptoms (e.g., cough, shortness of breath), and at least seven (7) days have passed *since symptoms first appeared*.

If an HCW was not tested for COVID-19, but has an alternate diagnosis (e.g., tested positive for influenza), criteria for return to work should be based on that diagnosis.

Return to Work Practices and Work Restrictions for HCW with Confirmed or Suspected COVID-19 Infection

Upon returning to work, the HCW should wear a facemask at all times while in the MTF until all symptoms are completely resolved or until 14 days after illness onset, whichever is longer. The HCW should be restricted from contact with severely immunocompromised patients (e.g., transplant, hematology-oncology) until 14 days after illness onset, should adhere to hand

[3] Extracted from the Centers for Disease Control and Prevention (CDC) guidance document entitled *Criteria for Return to Work for Healthcare Personnel with Confirmed or Suspected COVID-19 (Interim Guidance)*, available at https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/hcp-return-work.html.

hygiene, respiratory hygiene, and cough etiquette (e.g., cover nose and mouth when coughing or sneezing, dispose of tissues in waste receptacles), should self-monitor for symptoms, and should seek re-evaluation from occupational health if respiratory symptoms recur or worsen.

Crisis Strategies to Mitigate Staffing Shortages

MTFs and the appropriate state and/or local health authorities might determine that the above-recommended approaches cannot be followed due to the need to mitigate HCW staffing shortages. In such instances, the HCW should be evaluated by occupational health to determine appropriateness of earlier return to work than recommended above. If the HCW is returned to work earlier than recommended above, the HCW should still adhere to the “Return to Work Practices and Work Restrictions” recommendations above.

This guidance is based on currently available data about COVID-19. Recommendations regarding which HCWs are restricted from work may not anticipate every potential scenario and will change if indicated by new information.

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APPENDIX A

DEFINITIONS, ACRONYMS, AND OTHER REFERENCES

DEFINITIONS:

Self-monitoring

HCWs monitor themselves for fever by taking their temperature twice a day and remaining alert for respiratory symptoms (e.g., cough, shortness of breath, sore throat). Anyone on self-monitoring should be provided a plan for whom to contact if they develop fever or respiratory symptoms during the self-monitoring period to determine whether medical evaluation is needed.

Active monitoring

The state or local public health authority assumes responsibility for establishing regular communication with potentially exposed people to assess for the presence of fever or respiratory symptoms (e.g., cough, shortness of breath, sore throat). For HCWs with high- or medium-risk exposures, the CDC recommends this communication occurs at least once each day. The mode of communication can be determined by the state or local public health authority and may include telephone calls or any electronic or internet-based means of communication.

For HCWs, active monitoring can be delegated by public health authorities to the MTF's occupational health or infection control program, if both are in agreement. **Note:** Inter-jurisdictional coordination is needed if an HCW lives in a different local health jurisdiction than where the healthcare facility is located.

Self-Monitoring with delegated supervision

The HCW performs self-monitoring with oversight by the MTF's occupational health or infection control program in coordination with public health authorities, if these programs and public health authorities are both in agreement. On days in which the HCW is scheduled to work, MTFs should consider measuring temperature and assessing symptoms prior to starting work. Alternatively, an MTF may consider having the HCW report temperature and absence of symptoms to occupational health prior to starting work. Modes of communication may include telephone calls or any electronic or Internet-based means of communication.

Occupational health or infection control personnel should establish points of contact between the MTF, the self-monitoring HCW, and public health authorities in the location where self-monitoring personnel will be during the self-monitoring period. This communication should result in agreement on a plan for medical evaluation of personnel who develop fever or respiratory symptoms (e.g., cough, shortness of breath, sore throat) during the self-monitoring period. The plan should include instructions for notifying occupational health and the local public health authority, and transportation arrangements to a designated hospital, if medically necessary, with advance notice if fever or respiratory

symptoms occur. The supervising organization should remain in contact with the HCW through the self-monitoring period to manage self-monitoring activities and provide timely and appropriate follow-up if symptoms occur in the HCW. **Note:** Inter-jurisdictional coordination is needed if an HCW lives in a different local health jurisdiction than where the healthcare facility is located.

Close contact

Being within approximately 6 feet (2 meters) of a person with COVID-19 for a prolonged period of time (such as caring for or visiting the patient; or sitting within 6 feet of the patient in a healthcare waiting area or room)—or—having unprotected direct contact with infectious secretions or excretions of the patient (e.g., being coughed on, touching used tissues with a bare hand).

Data are limited for definitions of close contact. Factors for consideration include the duration of exposure (e.g., longer exposure time likely increases exposure risk), clinical symptoms of the patient (e.g., coughing likely increases exposure risk), and whether the patient was wearing a facemask (which can efficiently block respiratory secretions from contaminating others and the environment), PPE used by the HCW, and whether aerosol-generating procedures were performed.

Data are insufficient to precisely define the duration of time that constitutes a prolonged exposure. However, until more is known about transmission risks, it is reasonable to consider an exposure greater than a few minutes as a prolonged exposure. Brief interactions are less likely to result in transmission; however, clinical symptoms of the patient and type of interaction (e.g., the patient coughing directly into the face of the HCW) remain important. Recommendations will be updated as more information becomes available.

Conversely, examples of brief interactions include: briefly entering the patient room without having direct contact with the patient or their secretions/excretions; brief conversation at a triage desk with a patient who was not wearing a facemask.

COVID-19

On February 11, 2020 the World Health Organization announced an official name for the disease that is causing the 2019 novel coronavirus outbreak, first identified in Wuhan, China. The new name of this disease is coronavirus disease 2019, abbreviated as COVID-19. In COVID-19, 'CO' stands for 'corona,' 'VI' for 'virus,' and 'D' for disease. Formerly, this disease was referred to as "2019 novel coronavirus" or "2019-nCoV".

There are many types of human coronaviruses including some that commonly cause mild upper-respiratory tract illnesses. COVID-19 is a new disease, caused by a novel (or new) coronavirus that has not previously been seen in humans.

Healthcare Worker

HCW refers to all paid and unpaid persons serving in healthcare settings who have the potential for direct or indirect exposure to patients or infectious materials, including body substances; contaminated medical supplies, devices, and equipment; contaminated

environmental surfaces; or contaminated air. For the purposes of this document, HCW does not include clinical laboratory personnel.

High-risk exposure

1. Prolonged close contact with patients with COVID-19 who were not wearing a facemask while the HCW's nose and mouth were exposed to material potentially infectious with the virus causing COVID-19; OR
2. Being present in the room for procedures that generate aerosols or during which respiratory secretions are likely to be poorly controlled (e.g., cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction) on patients with COVID-19 when the healthcare providers' eyes, nose, or mouth were not protected.

Medium-risk exposure

Prolonged close contact with patients with COVID-19 who were wearing a facemask while the HCW's nose and mouth were exposed to material potentially infectious with the virus causing COVID-19. Some low-risk exposures are considered medium-risk depending on the type of care activity performed. For example, HCWs who were wearing a gown, gloves, eye protection, and a facemask (instead of a respirator) during an aerosol-generating procedure would be considered to have a medium-risk exposure. If an aerosol-generating procedure had not been performed, they would have been considered low-risk.

Low-risk exposure

Interactions with patients with COVID-19 or prolonged close contact with patients who were wearing a facemask for source control while the HCW was wearing a facemask or respirator. Use of eye protection, in addition to a facemask or respirator, would further lower the risk of exposure.

No identifiable risk

HCWs with no direct patient contact and no entry into active patient management areas who adhere to routine safety precautions do not have a risk of exposure to COVID-19.

Fever

Measured temperature >100.0^{o}F or subjective fever. Note that fever may be intermittent or may not be present in some patients, such as those who are elderly, immunosuppressed, or taking certain medications (e.g., nonsteroidal anti-inflammatory drug [NSAIDs]). Clinical judgement should be used to guide testing of patients in such situations. Respiratory symptoms consistent with COVID-19 are cough, shortness of breath, and sore throat. Medical evaluation may be recommended for lower temperatures (<100.0^{o}F) or other symptoms (e.g., muscle aches, nausea, vomiting, diarrhea, abdominal pain headache, runny nose, fatigue) based on assessment by public health authorities.

ACRONYMS:

CDC
Centers for Disease Control and Prevention

COVID-19
Coronavirus disease 2019; [See definition also.]

HCW
healthcare worker

MEDCOM
U.S. Army Medical Command

MTF
medical treatment facility

NSAID
nonsteroidal anti-inflammatory drug

PUI
person under investigation

PPE
personal protective equipment

OTHER RESOURCES:

For guidance on risk assessment and public health management of persons not working in a U.S. healthcare setting refer to: *Interim US Guidance for Risk Assessment and Public Health Management of Persons with Potential Coronavirus Disease (COVID-19) Exposure in Travel-associated or Community Settings,* available at: https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html.

For infection prevention and control guidance for healthcare settings caring for Persons with Known or Under Investigation (PUI) for Coronavirus Disease (COVID-19), refer to the *Interim Infection Prevention and Control Recommendations for Patients with Known or Patients Under Investigation for Coronavirus Disease (COVID-19) in a Healthcare Setting,* available at: https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html.